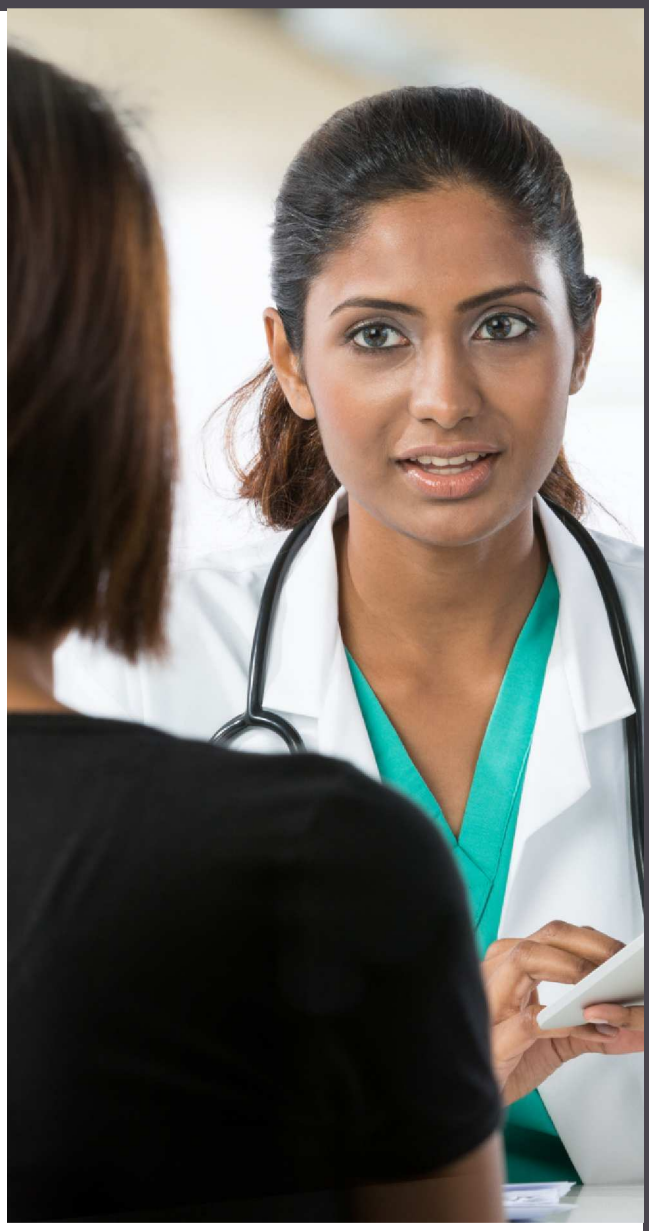
NOCA
National Ovarian Cancer Audit

National Ovarian Cancer Audit

Scoping Document

November 2023



NATCAN
National Cancer Audit Collaborating Centre

Royal College of Surgeons of England
ADVANCING SURGICAL CARE

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

NHS England

HQIP
Healthcare Quality Improvement Partnership

NDRS
NATIONAL DISEASE REGISTRATION SERVICE

GIG CYMRU NHS WALES
Rhwydwaith Canser Cymru
Wales Cancer Network

NOCA
National Ovarian Cancer Audit

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Royal College of Surgeons of England

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HQIP
Healthcare Quality Improvement Partnership

The National Cancer Audit Collaborating Centre (NATCAN) is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). NATCAN delivers national cancer audits in non-Hodgkin lymphoma, bowel, breast (primary and metastatic), oesophago-gastric, ovarian, kidney, lung, pancreatic and prostate cancers. HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing, and National Voices. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical, and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual projects, other devolved administrations and crown dependencies.
https://www.hqip.org.uk/national-programmes

List of acronyms

BGCS	British Gynaecological Cancer Society
BRCA	BReast CAncer gene
CEU	Clinical Effectiveness Unit (of the Royal College of Surgeons of England)
CRG	Clinical Reference Group
FIGO	The International Federation of Gynaecology and Obstetrics
HQIP	Healthcare Quality Improvement Partnership
ICS	Integrated Care System
LSHTM	London School of Hygiene & Tropical Medicine
MDT	Multidisciplinary Team
NATCAN	National Cancer Audit Collaborating Centre
NDRS	National Disease Registration Service
NICE	National Institute for Health and Care Excellence
NOCA	National Ovarian Cancer Audit
OCAFP	Ovarian Cancer Audit Feasibility Project
PPI	Patient and Public Involvement
QI	Quality Improvement
QPI	Quality Performance Indicator

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National Ovarian Cancer Audit – scoping document

Executive summary

The National Ovarian Cancer Audit carried out a scoping exercise to identify the quality improvement goals it will focus on for its first reports in 2024. The exercise drew on evidence including the Ovarian Cancer Audit Feasibility Pilot, national guidelines and previous work by the British Gynaecological Cancer Society on performance indicators. Following discussion with stakeholders from the audit's Clinical Reference Group the team recommends the following five goals: (i) Increase the proportion of patients receiving timely treatment decisions, (ii) Increase the proportion of patients receiving molecular diagnostics, (iii) Increase the proportion of patients receiving surgery; (iv) Increase the proportion of patients receiving chemotherapy, and (v) improve rates of survival and reduce variation in survival.

1 Introduction

The National Ovarian Cancer Audit (NOCA) is part of the National Cancer Audit Collaborating Centre (NATCAN). Further details on NATCAN and its structure and approach to audits are in Appendix 1.

The NOCA is provided through a partnership that combines clinical leadership, methodological expertise and project management from the British Gynaecological Cancer Society (BGCS) and the Clinical Effectiveness Unit at the Royal College of Surgeons of England.

The audit team will be supported by twice-yearly meetings of stakeholders in its Clinical Reference Group (CRG), which includes representatives from clinical professional bodies including clinicians involved with care across the patient pathway, patient representatives, commissioners and funder representatives. The audit will also have a Patient and Public Involvement (PPI) forum whose members represent a number of patient organisations.

Audit delivery is coordinated by a project manager, working alongside methodologists and a clinical fellow. Clinical leadership of the National Ovarian Cancer Audit is provided by representatives from the BGCS. A lead methodologist affiliated to NATCAN and LSHTM oversees the overall audit approach ensuring it is statistically robust and informed by research, see Appendix 2.

In addition to audit delivery, the audit team will develop and undertake a programme of related research focussing on methodological development, clinical epidemiology and health services research. Examples of potential methodological development research include work on indicator development, coding issues, handling missing data, and statistical methods for case mix adjustment and continuous monitoring. Clinical epidemiology research will be undertaken to gain a better understanding of, for example, variation in practice that can provide evidence to guide QI initiatives. Health services research provides an understanding of the structure and organisation of NHS cancer services, for example 'hub' versus 'spoke' hospitals, in order to target QI initiatives appropriately, and the role of health and health care inequalities with respect to variation in treatment and outcomes.

2 Purpose and approach of the scoping exercise

2.1 Scoping aim and objectives

The aim of the scoping exercise is to establish the initial scope of the NOCA. The objectives of the exercise are to:

(i) Agree criteria for inclusion in the audit, and
(ii) Agree the audit's five QI goals.

After producing the scoping document, the audit team will work on defining and refining a total of ten quality performance indicators (QPIs) that map to the QI goals and produce a Healthcare Improvement Plan.

2.2 Scoping principles and methods

Each QI goal should have the potential for the development of one or more QPIs that can be reported by the audit in 2024. Two issues considered were the availability of suitable data and the criteria required for a good indicator.

Firstly, all NATCAN audits will use existing data that are already collected from NHS organisations in England and Wales. No additional patient data will be collected. The audits will also make use of Rapid Cancer Registry Data available 3 months after diagnosis to ensure organisations are provided with timely feedback. Secondly, NATCAN expects QPIs to meet four criteria: validity (they measure what is intended), feasibility (they can be derived from available data), fairness (they are reported at the appropriate organisational level and, where relevant, are risk-adjusted) and statistical power (the indicators are able to detect meaningful variation between organisations and/or improvement over time.)

The scoping exercise, run by the NOCA team, aimed to ensure that the scope and design of the audit considers the needs of stakeholders whilst driving local and national quality improvement in services and outcomes for patients with ovarian cancer. The exercise built on the Ovarian Cancer Audit Feasibility Pilot (OCAFP), a project carried out in partnership between the National Disease Registration Service (NDRS), the BGCS, Ovarian Cancer Action and Target Ovarian Cancer. It also drew on work done by the BGCS on developing quality performance indicators.

The audit team summarised key evidence and proposed five QI goals in a scoping brief that was circulated to the CRG. Potential QPIs were presented for each of the proposed QI goals. Areas for potential QI goals that require longer-term development work were also reported. The scope of the audit was presented and discussed at a meeting of the CRG on 14th September 2023. CRG members also provided written feedback by email. The scoping brief was updated to incorporate stakeholder feedback. A summary of key evidence and stakeholder feedback from the scoping brief is presented in the next section.

3 Evidence to support the audit scope

3.1 Background

There are around 7,400 cases of ovarian cancer (including fallopian tube cancer and primary peritoneal cancer) diagnosed in the UK each year. Many patients are diagnosed at a late stage; two-thirds of patients are diagnosed at stage 3, stage 4 or are unstaged. Survival lags behind similar countries with age-standardized survival of 69.4% at one year and overall survival of 36.7% at five years.

In England, care is provided by NHS hospital trusts grouped into cancer systems in a hub- (cancer centre) and spoke (cancer unit) model. The trusts are located in 21 Cancer Alliances with each Alliance hosting between 1-4 of the 40 cancer centres. In 2022, 42 Integrated Care Systems (ICS) were established in England. ICSs are partnerships between NHS, local authority and other organisations and their remit includes improving healthcare outcomes and reducing inequalities in outcomes.

In Wales, care for gynaecological cancer is provided by cancer units and three cancer centres located in Health Boards/Trusts. Some care for patients in north Wales is provided by NHS Trusts in England. The Wales Cancer Network covers all of Wales.

3.2 The Ovarian Cancer Audit Feasibility Pilot

The OCAFP in England has published five reports to date. Key findings from this work are:

- Incidence has remained reasonably stable since 2001.
- Incidence and stage at presentation varies between Cancer Alliances.
- Survival has been improving but substantial variation in 1- and 5-year survival is seen across Cancer Alliances.
- Rates of treatment vary between Cancer Alliances and are more marked in surgery than in chemotherapy.
- Patients diagnosed at stage 4 are less likely to receive treatment.
- Treatment varies by age with women over 79 years less likely to receive surgery compared with younger women.
- Early (2 month) survival is worse for older patients, those diagnosed at a late or unknown stage, patients with unknown morphology, emergency or urgent presentations, patients with comorbidities and with higher deprivation. There was limited variation between Cancer Alliances.
- Surgical radicality scores can be extracted from HES data using BGCS agreed codes, however validation work is necessary before these scores can be used to compare surgical practice or to derive QPI.
- Scope for improving completeness of recorded stage data, patient's performance status and residual disease status after surgery.

3.3 Existing guidelines, quality standards and performance indicators

Guidelines for ovarian cancer (CG122) were published by the National Institute for Health and Clinical Excellence (NICE) in 2011 and include recommendations for the treatment of early (stage 1) and advanced (stage 2 to 4) ovarian cancer. More recently, NICE published interventional procedures guidance (IPG757) on maximal cytoreductive surgery which supported the use of this surgery in accredited specialised units for patients with advanced ovarian cancer. Guidelines on managing familial and genetic risk are due for publication in March 2024. NICE has also published

several technology appraisals on chemotherapy treatment of early and relapsed ovarian cancer and a number of appraisals are in progress.

Following initial findings from OCAFP the BGCS convened a multidisciplinary panel to establish consensus-based quality performance indicators. Drawing on previous work on QPIs from ESGO, the panel sought to develop QPIs relevant to the organisation of cancer services in NHS systems in the UK. The panel recommended six indicators comprising: (i) discussion of treatment by a multidisciplinary team (MDT), (ii) receipt of anticancer treatment of any type, (iii) receipt of cytoreductive surgery, (iv) recording of FIGO stage and performance status, (v) testing for germline BRCA1/2, and (vi) enrolment in research studies.

4 Audit scope

4.1 Inclusion criteria

The audit expects to include all patients newly diagnosed with ovarian cancer. This will comprise women with an ICD-10 diagnosis of ovarian cancer (ICD-10 code C56), fallopian tube cancer (C57), primary peritoneal cancer (C48) or cancer of the ovary of uncertain or unknown behaviour (D39.1). Patients with sarcomas or borderline tumours will be excluded.

4.2 QI goals

The audit team recommends the following five QI goals:

- Increase the proportion of patients receiving timely treatment decisions
- Increase the proportion of patients receiving molecular diagnostics
- Increase the proportion of patients receiving surgery
- Increase the proportion of patients receiving chemotherapy
- Improve rates of survival and reduce variation in survival

The first goal, **to increase the proportion of patients receiving timely treatment decisions**, is based on existing NICE recommendations on treatment decisions and allows for the development of indicators at a broader heath system level that capture variation in late presentation of patients with ovarian cancer, an issue highlighted by the OCAFP.

The second goal, **to increase the proportion of patients receiving molecular diagnostics**, is also supported by existing guidance and recommendations for indicators on BRCA testing by the BGCS. A goal relating to molecular diagnostics will provide the basis for further work on personalised medicine and the possible development of indicators in areas such as targeted maintenance therapy.

The third and fourth goals, **to increase the proportion of patients receiving surgery and receiving chemotherapy** for first line treatment, are included as separate QI goals because of their importance and the extent of guidance on recommended treatments such as NICE's recent 2023 recommendations on maximal cytoreductive surgery. The QI goals are also supported by a BGCS-recommended indicator on receipt of anticancer treatment.

The fifth QI goal, **to improve rates of survival and reduce variation in survival**, provides a focus on outcomes and will require appropriate data adjustment for case mix.

The audit team considered other potential QI goals including, at least, (i) the diagnostic process, (ii) harms of treatment, (iii) maintenance therapy, and (iv) the treatment of recurrent disease. NICE have made recommendations for maintenance treatment and the treatment of recurrent disease. The NOCA considers these to be important areas for development work on possible future QPIs. For example, aspects of care such as quality of life, patients' experience of care and palliative treatment will be important to consider in areas such as the harms of treatment and the treatment of recurrent disease.

4.3 Stakeholder feedback

Stakeholders were supportive of the audit inclusion criteria and the five QI goals outlined in section 4. Discussion focussed on potential QPIs within each QI goal and more general issues. Stakeholders helped highlight variation in surgery and access to chemotherapy as important issues to consider. The ability of the NOCA to develop QPIs that provide a fair assessment of organisations' performance in its reporting was also emphasised. Other feedback is summarised below:

- Data from Wales, as currently collected, are unlikely to be suitable for rapid reporting of QPIs.
- The timeliness of treatment was identified as important with respect to the receipt of first-line treatment.
- The quality and completeness of data to support QPIs was highlighted. It was noted that there have been substantial improvements in the recording of performance status for gynaecological cancer in the last two years.
- An appropriate level or footprint for the reporting of QPIs was raised.
- Indicators with near 100% compliance such as discussion at a MDT are to be avoided.
- The need for primary care input to the NOCA given stakeholder enthusiasm for a QPI relating to late presentation of patients in secondary care such as the proportion of patients presenting as emergency admissions.

5 Future work

The next steps following the scoping exercise are:

(i) Development of QPIs. Following publication of the audit scope (early November) the next step is to develop performance indicators and map these to QI goals. These QPIs will be used support the audit's objectives and to monitor progress towards its healthcare improvement goals. This work will begin once NATCAN has received all requested datasets; at this point, the feasibility of deriving each QPI from the available data will be evaluated.

(ii) Healthcare improvement plan. The healthcare improvement plan will build on this scoping document. It will outline the audit's QPIs and how they map to the QI goals, alongside strategies for reporting and disseminating results from the NOCA.

The two principal strategies for reporting NOCA results are:

(i) A short "state of the nation" report for NHS Trusts/Health Boards within England and Wales. These reports will highlight where services should focus quality improvement activities.

(ii) An indicator dashboard on the NOCA website that contains NHS organisational-level results. These dashboard indicators will facilitate benchmarking and the monitoring of performance at regular intervals so improvements in performance can be tracked.

These outputs will be accompanied by a range of healthcare improvement tools that will support their use by national, regional, and local stakeholders. Details of healthcare improvement tools, methods and activities will be outlined in the healthcare improvement plan.

The NOCA will establish a Patient and Public Involvement (PPI) Forum. Patient representatives will be regularly consulted on audit priorities, as well as the content of the NOCA dashboard and presentation of the annual State of the Nation reports, including communication of results.

The NOCA will communicate regularly with stakeholders, including patients and the public via quarterly newsletters, the NOCA website and NOCA social media, highlighting quality improvement methods and tools, where appropriate. The NOCA will present audit results at national conferences and publish articles in medical journals and other media.

Appendix 1: National Cancer Audit Collaborating Centre

NOCA is part of the National Cancer Audit Collaborating Centre (NATCAN), a national centre of excellence launched on 1st October 2022 to strengthen NHS cancer services by looking at treatments and patient outcomes in multiple cancer types across the country. The centre was commissioned by the Healthcare Quality Improvement Partnership (HQIP) on behalf of NHS England and the Welsh Government with funding in place for an initial period of three years.

NATCAN is based within the Clinical Effectiveness Unit (CEU), the academic partnership between the Royal College of Surgeons of England (RCS Eng) and the London School of Hygiene & Tropical Medicine. The CEU is recognised as a national centre of expertise in analytic methodology and the development of administrative and logistic infrastructure for collating and handling large-scale data for assessment of health-care performance.

Prior to the launch of NATCAN, the CEU was already the sole provider of national cancer audits in the NHS in England and Wales, incorporating audits in prostate, lung, bowel, and oesophago-gastric cancers, and recently completed an audit of breast cancer in older patients. These audits have helped provide a wider understanding of cancer treatments across England and Wales and have improved services and infrastructure leading to improved outcomes for patients. By consistently placing quality improvement (QI) at the centre of all audits, initiatives which promote QI within NHS cancer services have been developed and areas of best practice identified.

Alongside the NOCA, NATCAN delivers five other audits in kidney, pancreatic, breast (two separate audits in primary and metastatic disease) and non-Hodgkin Lymphoma. The aim of these audits is to:

1. Provide regular and timely evidence to cancer services of where patterns of care in England and Wales may vary.
2. Support NHS services to increase the consistency of access to treatments and help guide quality improvement initiatives.
3. Stimulate improvements in cancer detection, treatment and outcomes for patients, including survival rates.

The audits which the CEU already provided have joined NATCAN (bowel, oesophago-gastric and prostate) or will, in the near future (lung), bringing the number of NATCAN audits to ten. This critical mass of knowledge and expertise enable it to respond to the requirements of the funders and stakeholders.

Key features of NATCAN's audit approach

The design and delivery of the audits in NATCAN has been informed by the CEU's experience delivering national audits, built up since its inception in 1998. Key features of all audit projects within the CEU include:

- Close clinical-methodological collaboration
- Use of national existing linked datasets as much as possible
- Close collaboration with data providers in England (National Disease Registration Service [NDRS, NHSE] and Wales (Wales Cancer Network [WCN], Public Health Wales [PHW])
- A clinical epidemiological approach, informing quality improvement activities.
- "Audit" informed by "research".

All these features will support NATCAN's focus on the three "Rs", ensuring that all its activities are clinically relevant, methodologically robust, and technically rigorous.

Organisational structure of NATCAN

Centre Board

NATCAN has a multi-layered organisational structure. NATCAN's Board provides top-level governance and oversees all aspects of the delivery of the contract, ensuring that all audit deliverables are produced on time and within budget and meet the required quality criteria. The Board also provides the escalation route for key risks and issues. It will also consider NATCAN's strategic direction. The Board will meet at 6-monthly intervals and will receive regular strategic updates, programme plans, and progress reports for sign-off. Risks and issues will be reported to the NATCAN Board for discussion and advice.

Executive Team

NATCAN's Executive Team is chaired by the Director of Operations (Dr Julie Nossiter) and includes the Clinical Director (Dr Ajay Aggarwal), the Director of the CEU (Prof David Cromwell), the Senior Statistician (Dr Kate Walker), and the Senior Clinical Epidemiologist (Prof Jan van der Meulen) with support provided by NATCAN's project manager (Ms Verity Walker). This Executive Team is responsible for developing and implementing NATCAN's strategic direction, overseeing its day-to-day running, and coordinating all activities within each of cancer audits. This group meets monthly. The Executive Team will provide 6-monthly updates to NATCAN's Board.

Advisory groups

The Executive Team will be supported by two external groups. First, the Technical Advisory Group including external senior data scientists, statisticians, and epidemiologists as well as representatives of the data providers (NDRS, NHSD and WCN, PHW), co-chaired by NATCAN's Senior Statistician and Senior Epidemiologist, will advise on national cancer data collection, statistical methodology, development of relevant and robust performance indicators to stimulate QI, and communication to practitioners and lay audiences.

Second, the Quality Improvement Team includes national and international experts who have extensive experience in QI and implementation research. This team will provide guidance on the optimal approaches to change professional and organisational behaviour. It will be chaired by NATCAN's Clinical Director and managed by the Director of Operations.

This set up will provide a transparent and responsive management structure allowing each audit to cater for the individual attributes of the different cancer types, while also providing an integrated and consistent approach across the NATCAN audits. The integrated approach will result in efficient production of results through sharing of skills and methods, a common "family" feel for users of audit outputs, and a shared framework for policy decisions and, project management.

Audit Project Teams

Audit development and delivery is the responsibility of each Project Team. The Project Team works in partnership to deliver the objectives of the audit and is responsible for the day-to-day running of the audit and producing the deliverables. It will lead on the audit design, data collection, data quality monitoring, data analysis and reporting.

Each cancer audit Project Team is jointly led by two Clinical Leads representing the most relevant professional organisations, and senior academics with a track record in health services research, statistics, data science and clinical epidemiology, affiliated to the London School of Hygiene and

Tropical Medicine. In addition, each audit will have a clinical fellow, who contributes to all aspects of the audits, reinforcing the audits' clinical orientation and contributing to capacity building.

The delivery of the audit is coordinated by an audit manager who is supported by NATCAN's wider infrastructure. Data scientists with experience in data management and statistics and methodologists with experience in performance assessment and QI work across audits.

Audit Clinical Reference Groups

Each audit has a Clinical Reference Group representing a wide range of stakeholders. This group will act as a consultative group to the Project Team on clinical issues related to setting audit priorities, study methodology, interpretation of audit results, reporting, QI, and implementation of recommendations.

Effective collaboration within the centre and across audits facilitates the sharing of expertise and skills in all aspects of the delivery process, notably: designing the audits, meeting information governance requirements, managing and analysing complex national cancer data to produce web-based indicator dashboards / state of the nation reports, and supporting quality improvement. This organisation creates "critical mass" and audit capacity that is able to respond to the requirements of the funders (NHS England and Welsh Government) and the wider stakeholder "family".

Audit PPI Forums

Patients and patient charities are involved in all aspects of the delivery of the cancer audits. Each audit will also have a standalone Patient and Public Involvement (PPI) Forum to provide insight from a patient perspective on strategic aims and specific audit priorities. This will include shaping the development of each audit's quality improvement initiatives by ensuring this work is relevant from a patient perspective. A key activity of the PPI Forums will be to actively participate in the production of patient-focussed audit outputs (including patient and public information, patient summaries of reports, infographics and design and function of the NATCAN website), guiding on how to make this information accessible.

Data acquisition

The NATCAN Executive Team is working closely with data providers in England (NDRS, NHSE) and in Wales (WCN, PHW) to establish efficient "common data channels" for timely and frequent access to datasets, combining data needs for all cancers into a single request in each Nation and only using routinely collected data, thereby minimising the burden of data collection on provider teams.

Annual and quarterly data

NATCAN will utilise two types of routinely collected data in England. First, an annual "gold-standard" cancer registration dataset, released on an annual basis with a considerable delay between the last recorded episode and the data being available for analysis, and second, a "rapid" cancer registration dataset (RCRD), released at least quarterly with much shorter delays (3 months following diagnosis). The CEU's recent experience with English rapid cancer registration data, in response to the COVID pandemic has demonstrated the latter's huge potential,[1] despite a slightly lower case ascertainment and less complete staging information.

[1] Nossiter J, Morris M, Parry MG, Sujenthiran A, Cathcart P, van der Meulen J, Aggarwal A, Payne H, Clarke NW. Impact of the Covid-19 pandemic on the diagnosis and treatment of men with prostate cancer. BJU Int. 2022 Jan 25. doi: 10.1111/bju.15699.

NATCAN will utilise these data across all cancers linked to administrative hospital data (Hospital Episode Statistics/Systemic Anti-Cancer Therapy/Radiotherapy Data Set/Office National Statistics among other routinely collected datasets, see Figure) for describing diagnostic pathway patterns, treatments received and clinical outcomes.

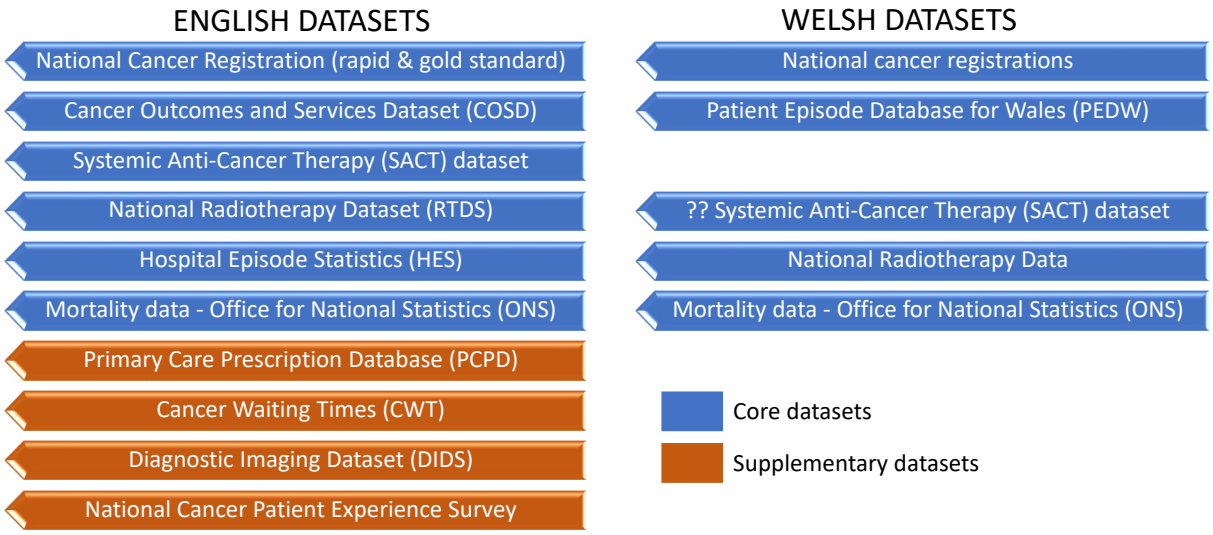

Figure. National datasets available to NATCAN.

An equivalent data request will be made to the Wales Cancer Network (WCN)/Public Health Wales (PHW).

Information governance

NATCAN will comply with legislation and good practice principles to ensure data security and patient confidentiality. The patient-level information received and managed by NATCAN is treated as confidential. When analysing data to produce information on patient care and outcomes, NATCAN audit teams use de-identified data and so individual patients are not identifiable.

HQIP and NHSE are joint data controller for the linked de-identified dataset that is supplied to NATCAN for analysis.

Reporting

Individual cancer audits will produce:

- Annual '*State of the Nation'* reports for NHS Trusts/Health Boards and related organisations within England and Wales. These reports will highlight where local services should focus quality improvement activities.
- NHS organisational-level results (as well as national and regional results) as a dashboard on the NATCAN website. These dashboard results will be refreshed on a quarterly and annual basis, and the website will include the facility to download activity summaries and outcomes as short PDF documents and presentations.

These outputs will be supported by a range of tools that will support their use by local services and other stakeholders, including slide sets and QI resources. Additional outputs include peer-reviewed publications and presentations at national and international meetings. Newsletters will be disseminated to announce the publication of new results to clinical teams and audit stakeholders. Summaries of the '*State of the Nation'* reports from each cancer audit will be prepared for patients and the general public and available on the NATCAN website, in addition to information for patients. Patient representatives in the PPI Forums and Clinical Reference/Advisory Groups of each cancer audit will provide input into the development of the audit outputs.

Publication of comparative local outcomes, along with the associated commentary, allow patients to understand the quality of care being offered and enable them to ask Trusts/Health Boards and clinical teams how they plan to put right any deficiencies identified via the audits.

Healthcare improvement

A priority for each audit in NATCAN is the development of a healthcare improvement plan that includes explicit QI goals aiming to improve cancer outcomes as well as the patient experience. These plans will be built around clinically relevant and methodologically robust performance indicators that each audit will develop and disseminate.[2]

The healthcare improvement plan will also set out the key drivers for each QI goal, alongside national and local improvement tools.[3] NATCAN will ensure that its healthcare improvement programme will be closely aligned with related activities implemented by other relevant organisations (e.g., CQC and Getting it Right First Time in England, and NHS Quality Improvement and Patient Safety in Wales).

Each audit within NATCAN will complete at least one national QI initiative using the RCRD, aiming "to close the audit cycle" following an approach commonly referred to as the "plan-do-study-act" method.[4] This will be a first at national level and we envisage that it will become a core element of involvement for the NATCAN QI Team.

Again, NATCAN will build on the CEU's longstanding experience in targeting and designing QI implementation approaches, ensuring that the audit feedback information and recommendations truly reach the clinicians who can act on it, also incorporating specific action plans.

[2] Geary RS, Knight HE, Carroll FE, Gurol-Urganci I, Morris E, Cromwell DA, van der Meulen JH. A step-wise approach to developing indicators to compare the performance of maternity units using hospital administrative data. BJOG. 2018 Jun;125(7):857-865. doi: 10.1111/1471-0528.15013.

[3] Foy R, Skrypak M, Alderson S, Ivers NM, McInerney B, Stoddart J, Ingham J, Keenan D. Revitalising audit and feedback to improve patient care. BMJ. 2020 Feb 27;368:m213. doi: 10.1136/bmj.m213.

[4] Taylor MJ, McNicholas C, Nicolay C, Darzi A, Bell D, Reed JE. Systematic review of the application of the plan-do-study-act method to improve quality in healthcare. BMJ Qual Saf. 2014 Apr;23(4):290-8. doi: 10.1136/bmjqs-2013-001862.

Appendix 2: The NOCA project team

The audit will be delivered by a team that combines clinical leadership, methodological expertise, and project management. The clinical leads are:

- Professor Agnieszka Michael, Clinical Lead (Medical Oncology)
- Professor Sudha Sundar, Clinical Lead (Surgery)

The other members of the audit team provide methodological, statistical, and project management expertise: Jo Boudour (Senior Project Manager), Jan van der Meulen (Lead Methodologist), Ipek Gurol-Urganci (Senior Methodologist), Andrew Hutchings (Methodologist), and Georgia Zachou (Clinical Fellow).

The Clinical Reference Group (CRG) will provide advice to the project team. It will usually convene twice a year to advise on the direction of the audit and feedback on interpretation of audit findings. The CRG will also help in the dissemination of audit findings. The CRG members represent patient organisations and healthcare professional groups, including Target Ovarian Cancer, Ovarian Cancer Action, the British Gynaecological Cancer Society, the Royal College of Radiologists, the International Society of Gynaecological Pathologists, and the Royal College of Surgeons of England (RCSEng).

The audit will also have a PPI forum whose members represent patients and carers with lived experience of ovarian cancer.